

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21-25 and 27-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard Louis Dit Picard, WO 0076384 A1 in view of Rearick et al., US 2002/0064639 A1 (note US 6,998,360 is relied upon as a translation of WO document).

The published WO document issued to Picard teaches a multi-layer absorbent cotton article comprising a first layer of cotton fibers exhibiting a low micronaire and second cotton fiber layer exhibiting a higher micronaire (abstract). Picard teaches that the first layer exhibits a micronaire ranging from 2.8 to 4.2 and a second layer exhibiting a micronaire ranging from 5-8.5 (column 2, 45-50). With regard to the basis weight limitations, Picard teaches that the layers weigh between 10-300 gms (column 4, 30-40). Picard further teaches a three layer composite structure (column 5, 18-25). Picard teaches employing raw cotton fibers (column 5, 40-45). Picard teaches joining the individual layers by hydroentangling (column 5, 60-65).

Picard fails to teach the claimed types of cellulose fibers or the claimed carding and/or air laying methods, however, the published patent application issued to Rearick et al., teach cellulose layer comprising cellulosic fibers such as cotton, jute, flax, hemp or ramie (section 0029). Said cellulose layer can be formed by carding or air-laying (section 0119). It is the

position of the Examiner that such forming methods are commonly known in the textile art and are often used to form non-woven textiles. Rearick et al., teach that the cellulose layer exhibits the ability to wick liquid contacting the inside of the substrate to the outside of the substrate (abstract).

Therefore, motivated by the desire to form an absorbent multi-layer article with the ability to wick liquid, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the multi-layer cotton article of Picard with the specific types of cellulosic fibers taught by Rearick et al.

With regard to the breaking strength and grammage limitations, the combination of Picard in view of Rearick et al., fails to explicitly teach such features. However, it is expected that the multi-layer cotton article of Picard in view of Rearick et al., would exhibit the claimed breaking strength and grammage features once the article is provided. Support for said presumption is found in the use of like materials such as the claimed cellulose fibers having the claimed micronaire limitations and the use of like process such as forming a hydroentangled multi-layer structure. Applicant is invited to prove otherwise.

3. Claims 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 826811 in view of Bernard Louis Dit Picard, WO 0076384 (note US 6,998,360 is relied upon as a translation of WO document).

The published EP abstract teaches an absorbent non-woven material comprising two layers bonded together. The EP reference teaches that the first layer comprises wholly or partially synthetic fibers and the second layer comprises natural and/or synthetic fibers. It is the position of the Examiner that cotton or cellulose is a commonly known natural fiber. The EP

reference further teaches that the fibers of the second layer are thinner than the fibers of the first layer. The EP reference fails to specifically set forth the claimed cellulose fibers having the claimed micronaire in both layers; however, the published WO document issued to Picard teaches a multi-layer cotton article comprising a first layer of cotton fibers exhibiting a low micronaire and second cotton fiber layer exhibiting a higher micronaire (abstract). Picard further teaches that the first layer exhibits a micronaire ranging from 2.8 to 4.2 and a second layer exhibiting a micronaire ranging from 5-8.5 (column 2, 45-50). Picard teaches that the composite cotton product exhibits a soft side and rough side due to the cellulosic substrates having lower and higher micronaire fibers (abstract).

Therefore, motivated by the desire to provide an absorbent composite structure with a soft side and rough side, it would have been obvious to one having ordinary skill in the art to form the absorbent composite taught by the EP reference with cellulose/cotton fibers having the micronaire ranges taught by Picard.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M. Salvatore whose telephone number is 571-272-1482. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lynda Salvatore/
Primary Examiner
Art Unit 1794
1/3/08